

### **REMARKS/ARGUMENTS**

#### **Objections to Drawings**

The Examiner has objected to the lack of amended drawings in the previous Response to Office Action. The Examiner has stated that the proposed changes to the Figs. 3 and 10 detailed in the previous Response to Office Action would be accepted as proposed however. In addition the Category BVs of Figure 4, namely BV 440, 441 and 442 have been corrected in the Amended Figure 4 included herewith. Applicant repeats the Remarks with Regards to the Drawings from the previous Response to Office Action and herein includes the Drawings so modified:

The Examiner has objected to Fig. 3 because reference characters "320-322" have been used to designate records in both the manufacturers and categories tables.

Fig. 3 has been amended to provide newly numbered elements 350, 351 and 352 where duplicative elements 320, 321 and 322 existed on table 302. The specification has been amended on Page 14, ll. 6-19 to describe the 320-322 and 350-352 reference characters.

In addition, Fig. 10 has been amended since it previously showed the indices of the two tables switched between the two tables, so the index name "Manufacturer ID" index label has been removed from the first table and is now used to label the index for the second table and also the "Category ID" index label has been moved from the second table to the first table.

#### **Claim remarks with regards to 35 U.S.C. §112**

The Examiner has rejected claims 76 and 77 under 35 U.S.C. §112. The Examiner has stated:

"... the specific matter claimed in claim 76 seems to be limited to a situation where there are only two possible values for the claimed 'first field', and furthermore the limitations regarding the calculation of 'counts', and the last

limitation regarding 'having dimensions sized to a count regardless of the total data record count' does not seem to have analogous disclosure, and the reason for the limitations and their purpose are unclear to the examiner."

In response, Applicant states that claim 76 and 77 are not limited to a case of only two values for the claimed 'first field' (or one value for the claimed 'second field' for that matter) since the preamble uses a transitional phrase of "comprising" and therefore may comprise as many unique values in a first (or in a second field) as there happen to be in the database without limit.

Applicant has amended claims 76 and 77 in order to eliminate the 'counts' which were intended to demonstrate the dimensions of the value limit correlation wherein the first dimension for example is now delineated instead as "a first number of distinct values held in said first field". A database comprising 10,000,000 records for example with a first field comprising 10 values and a second field comprising 20 unique values therefore would comprise a value limit correlation of 10 by 20, not 10,000,000 by 10 or 20 as would be the case for the corresponding bit vector indices.

In addition, Applicant has amended claims 76 and 77 to further illustrate operation of the 'logical AND' operation as suggested by the Examiner.

The references cited by the Examiner do not contemplate a value limit correlation as claimed in claim 76 and further do not contemplate "determining if at least one record in a database exists wherein said at least one record comprises both said first value in said first field and said third value in said second field by accessing said value limit correlation and without accessing said database and without accessing said first, said second or said third bit vectors."

Furthermore, the references cited by the Examiner do not contemplate the updating a value limit correlation when a data field is altered in a database as claimed in claim 77.

Specifically, none of the references previously cited by the Examiner contemplate "setting a Boolean true value in said value limit correlation at said first index corresponding to said second value and at said second index corresponding to said third value; performing a third logical "AND" operation on said first bit vector with said third bit vector to yield a third result Boolean value wherein said third logical "AND" operation terminates upon achieving a third successful match; and, setting a Boolean false value in said value limit correlation at said first index corresponding to said first value and at said second index corresponding to said third value if said performing said third logical "AND" operation yields a false third result Boolean value. "

**Claim remarks with regards to 35 U.S.C. §102**

Claims 64 and 65 are now canceled thus rendering previous rejections moot.

**Claim remarks with regards to 35 U.S.C. §103**

Claims 66 through 75 are now canceled thus rendering previous rejections moot.

**Specification**

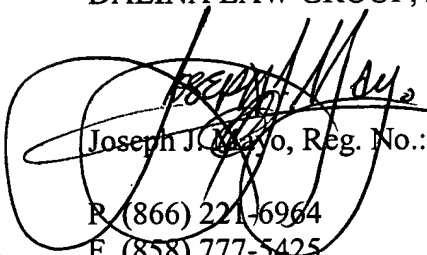
The specification has been amended to use the correct reference characters as shown in amended Fig. 3, table 302, depicting records 350-352 as Categories table records. In addition, the description of BV 430 and BV 441 has been corrected on p. 16 of the specification with reference to Fig. 4.

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Response dated 8/9/2004  
Reply to Office Action of 4/9/2004

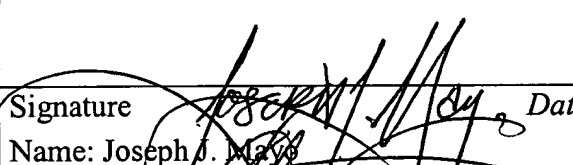
## CONCLUSION

For at least the reasons stated herein, Applicant respectfully submits that the pending claims are in condition for allowance. If the Examiner differs in this conclusion, the Examiner is hereby requested to contact Applicant's representative for purposes of a telephone interview at the number listed below before any action (other than an allowance) is initiated.

Respectfully submitted,  
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<p>Correspondence Info:</p> <p>Customer Number</p> <p><b>36067</b></p>	<p><b><i>CERTIFICATE OF MAILING or TRANSMISSION</i></b></p> <p><i>I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office on <u>August 9, 2004</u> to (703) 872-9306 or is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.</i></p>
	<p>Signature  Date: August 9, 2004</p> <p>Name: Joseph J. Mayo</p>